

Environmental Protection Agency

Pt. 63, Subpt. IIIII, Table 7

TABLE 6 TO SUBPART IIIII OF PART 63—EXAMPLES OF TECHNIQUES FOR EQUIPMENT PROBLEM IDENTIFICATION, LEAK DETECTION AND MERCURY VAPOR

As stated in Tables 1 and 2 of Subpart IIIII, examples of techniques for equipment problem identification, leak detection and mercury vapor measurements can be found in the following table:

To detect . . .	You could use . . .	Principle of detection . . .
1. Leaking vent hoses; liquid mercury that is not covered by an aqueous liquid in open-top containers or end boxes; end box covers or stoppers, amalgam seal pot stoppers, or caustic basket covers not securely in place; cracks or spalling in cell room floors, pillars, or beams; caustic leaks; liquid mercury accumulations or spills; and equipment that is leaking liquid mercury.	Visual inspections	
2. Equipment that is leaking hydrogen and/or mercury vapor during inspections required by Table 2 to this subpart.	a. Auditory and visual inspections	
	b. Portable mercury vapor analyzer—ultraviolet light absorption detector.	A sample of gas is drawn through a detection cell where ultraviolet light at 253.7 nanometers (nm) is directed perpendicularly through the sample toward a photodetector. Elemental mercury absorbs the incident light in proportion to its concentration in the air stream.
	c. Portable mercury vapor analyzer—gold film amalgamation detector.	A sample of gas is drawn through a detection cell containing a gold film detector. Elemental mercury amalgamates with the gold film, changing the resistance of the detector in proportion to the mercury concentration in the air sample.
	d. Portable short-wave ultraviolet light, fluorescent background—visual indication.	Ultraviolet light is directed toward a fluorescent background positioned behind a suspected source of mercury emissions. Elemental mercury vapor absorbs the ultraviolet light, projecting a dark shadow image on the fluorescent background.
3. Level of mercury vapor in the cell room and other areas.	e. Portable combustible gas meter.	
	a. Portable mercury vapor analyzer—ultraviolet light absorption detector.	See Item 2.b.
	b. Portable mercury vapor analyzer—gold film amalgamation detector.	See Item 2.c.
	c. Permanganate impingement	A known volume of gas sample is absorbed in potassium permanganate solution. Elemental mercury in the solution is determined using a cold vapor adsorption analyzer, and the concentration of mercury in the gas sample is calculated.

TABLE 7 TO SUBPART IIIII OF PART 63—REQUIRED ELEMENTS OF WASHDOWN PLANS

As stated in § 63.8192, your written washdown plan must address the elements contained in the following table:

For each of the following areas . . .	You must establish the following as part of your plan . . .
1. Center aisles of cell rooms	A description of the manner of washdown of the area, and the washdown frequency for the area.
2. Electrolyzers	
3. End boxes and areas under end boxes	
4. Decomposers and areas under decomposers	
5. Caustic baskets and areas around caustic baskets	
6. Hydrogen system piping	
7. Basement floor of cell rooms	

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For each of the following areas . . .	You must establish the following as part of your plan . . .
8. Tanks 9. Pillars and beams in cell rooms 10. Mercury cell repair areas 11. Maintenance shop areas 12. Work tables 13. Mercury thermal recovery units 14. Storage areas for mercury-containing wastes	

TABLE 8 TO SUBPART IIII OF PART 63—REQUIREMENTS FOR CELL ROOM MONITORING PROGRAM

As stated in §63.8192(g)(1), your mercury monitoring system must meet the requirements contained in the following table:

If you utilize an . . .	Your . . .	Must . . .
1. Extractive cold vapor spectroscopy system.	a. Mercury vapor analyzer b. Sampling system	Be capable of continuously monitoring the elemental mercury concentration with a detection level at least two times lower than the baseline mercury concentration in the cell room. Obtain measurements at three or more locations along the center aisle of the cell room at a height sufficient to ensure that sample is representative of the entire cell room. One sampling location must be above the midpoint of the center aisle, and the other two an equidistance between the midpoint and the end of the cells.
2. Open path differential optical absorption spectroscopy system.	a. Mercury vapor analyzer b. Path	Be capable of continuously monitoring the elemental mercury concentration with a detection level at least two times lower than the baseline mercury concentration in the cell room. Be directed along the center aisle at a height sufficient to ensure that the sample is representative of the entire cell room.

TABLE 9 TO SUBPART IIII OF PART 63—REQUIRED RECORDS FOR WORK PRACTICE STANDARDS

As stated in §63.8256(c), you must keep the records (related to the work practice standards) specified in the following table:

For each . . .	You must record the following information . . .
1. Inspection required by Table 2 to this subpart	Date and time the inspection was conducted.
2. Situation found during an inspection required by Table 2 to this subpart: leaking vent hose; open-top container where liquid mercury is not covered by an aqueous liquid; end box cover that is not securely in place; end box stopper that is not securely in place; end box where liquid mercury is not covered by an aqueous liquid at a temperature below boiling; seal pot cover that is not securely in place; open or mercury seal pot stopper that is not securely in place; crack, spalling, or other deficiency in a cell room floor, pillar, or beam that could cause liquid mercury to become trapped; or caustic basket that is not securely in place.	a. Description of the condition. b. Location of the condition. c. Date and time you identify the condition. d. Description of the corrective action taken. e. Date and time you successfully complete the corrective action.
3. Caustic leak during an inspection required by Table 2 to this subpart.	a. Location of the leak. b. Date and time you identify the leak. c. Date and time you successfully stop the leak and repair the leaking equipment.
4. Liquid mercury spill or accumulation identified during an inspection required by Table 2 to this subpart or at any other time.	a. Location of the liquid mercury spill or accumulation. b. Estimate of the weight of liquid mercury. c. Date and time you detect the liquid mercury spill or accumulation. d. Method you use to clean up the liquid mercury spill or accumulation. e. Date and time when you clean up the liquid mercury spill or accumulation. f. Source of the liquid mercury spill or accumulation. g. If the source of the liquid mercury spill or accumulation is not identified, the time when you reinspect the area.